

**GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2019**

S

D

SENATE BILL 568

**Agriculture/Environment/Natural Resources Committee Substitute Adopted 6/13/19
PROPOSED COMMITTEE SUBSTITUTE S568-CSRIF-18 [v.10]**

06/18/2019 04:41:08 PM

Short Title: Recycling and Restoration/Renewable Energy.

(Public)

Sponsors:

Referred to:

April 4, 2019

1 AN ACT TO REQUIRE: (I) THE ENVIRONMENTAL MANAGEMENT COMMISSION TO
2 ADOPT RULES TO ESTABLISH A REGULATORY PROGRAM TO GOVERN: THE
3 MANAGEMENT OF END-OF-LIFE PHOTOVOLTAIC MODULES AND ENERGY
4 STORAGE SYSTEM BATTERIES, INCLUDING REQUIREMENTS FOR
5 STEWARDSHIP PROGRAMS FOR THE RECYCLING OF SUCH EQUIPMENT; AND
6 DECOMMISSIONING OF UTILITY-SCALE SOLAR PROJECTS AND WIND ENERGY
7 FACILITIES; AND (II) REQUIRE THE DEPARTMENT OF ENVIRONMENTAL
8 QUALITY TO ESTABLISH A STAKEHOLDER PROCESS TO SUPPORT
9 DEVELOPMENT OF THE RULES.

10 The General Assembly of North Carolina enacts:

11 **SECTION 1.(a)** No later than January 1, 2022, the Environmental Management
12 Commission shall adopt rules to establish a regulatory program to govern: (i) the management of
13 end-of-life photovoltaic modules and energy storage system batteries, including requirements for
14 stewardship programs for the recycling of such equipment; and (ii) decommissioning of
15 utility-scale solar projects and wind energy facilities. In the development of these rules, the
16 Commission shall consider all of the following elements:

- 17 (1) The need for adequate financial assurance to ensure proper decommissioning
18 and closure of existing or future-built solar facilities.
- 19 (2) Whether or not any materials used in utility-scale solar projects, including
20 solar panels and the constituent materials thereof, meet the characteristics of
21 hazardous waste or if they qualify as solid waste, how they can be responsibly
22 managed as noted in item (3) of this section.
- 23 (3) The extent to which solar panels, including all of the constituent materials
24 thereof, can be:
 - 25 a. Reused if not damaged or in need of repair for a similar purpose.
 - 26 b. Refurbished if not majorly damaged and then reused for a similar
27 purpose.
 - 28 c. Recycled with recovery of materials for similar or other purposes.
 - 29 d. Safely disposed of in construction and demolition or municipal solid
30 waste landfills if they are classified as non-hazardous by RCRA
31 standards.
 - 32 e. Safely disposed of as managed by universal waste or hazardous waste
33 requirements.
- 34 (4) The economic feasibility and availability of managing the disposition of solar
35 panels by the methods described in item (3) of this section.



* S 5 6 8 - C S R I F - 1 8 *

- (5) Whether and to what extent the land upon which a utility-scale solar project is constructed could be economically placed back into use for agriculture crop production after cessation of the activities of a utility-scale solar project.
- (6) The data-based expected economically productive life cycle of various types of solar panels currently in use.
- (7) A survey of other states' and countries' regulatory requirements relating to the decommissioning of utility-scale solar projects, including such requirements related to the disposition methods in item (3) of this section.
- (8) The necessary infrastructure needed to develop a practical, effective and cost-efficient means to collect, aggregate, transport or transfer solar equipment for the proper disposition, including through reuse, refurbishment, recycling or disposal.

Rules adopted shall require an initial and annual registration fee of one thousand dollars (\$1,000) to be paid by any manufacturer that sells photovoltaic modules, or energy storage system batteries, in or into the State. The Commission is authorized to adjust these fees, as necessary, to support the implementation of the requirements to be established by the rules required by this section.

SECTION 1.(b) For purposes of this act, the following definitions apply:

- (1) "End-of-life" means photovoltaic modules, energy storage system batteries, and other equipment used in utility-scale solar and wind energy projects that are removed and taken out of service, that will not be reused.
- (2) "Energy storage system battery" means a battery that is part of a system used to store chemical energy that was once electrical energy, for use in a process that contributes to end user demand management or grid operation and reliability. The term does not include energy storage system batteries: (i) that are part of a consumer electronic device for which it provides electricity needed to make the consumer electronic device function; or (ii) that are part of a plug in electric vehicle as defined in G.S. 20 4.01(28a), or an alternative fuel vehicle (AFV) as that term is defined in G.S. 143 58.4(a)(1).
- (3) "Photovoltaic module" means the smallest nondivisible, environmentally protected assembly of photovoltaic cells or other photovoltaic collector technology and ancillary parts intended to generate electrical power under sunlight, except that "photovoltaic module" does not include a photovoltaic cell that is part of a consumer electronic device for which it provides electricity needed to make the consumer electronic device function. "Photovoltaic module" includes interconnections, terminals, and protective devices such as diodes that: (i) are installed on, connected to, or integral with buildings; or (ii) are used as components of freestanding, off grid, power generation systems, such as for powering water pumping stations, electric vehicle charging stations, fencing, street and signage lights, and other commercial or agricultural purposes.
- (4) "Utility-scale solar project" means a ground-mounted photovoltaic (PV), concentrating photovoltaic (CPV), or concentrating solar power (CSP or solar thermal) project directly connected to the electrical grid that generates electricity for sale. The term includes the solar arrays, accessory buildings, transmission facilities, and any other infrastructure necessary for the operation of the project. The term does not include renewable energy facilities owned or leased by a retail electric customer intended primarily for the customer's own use to offset the customer's own retail electrical energy consumption at the premises.

(5) "Wind energy facility" means the turbines, accessory buildings, transmission facilities, and any other equipment necessary for the operation of the facility that cumulatively, with any other wind energy facility whose turbines are located within one half mile of one another, have a rated capacity of one megawatt or more of energy.

SECTION 1.(c) The Department shall, within 60 days following the effective date of this act, establish a stakeholder process for development of the regulatory program required pursuant to Section 1(a) of this act.

SECTION 1.(d) The Department and the Commission shall submit joint interim reports on activities conducted pursuant to this act on a quarterly basis beginning December 1, 2019, and shall submit a joint final report with findings, including stakeholder input, to the Environmental Review Commission and the General Assembly no later than January 1, 2021. The interim report due April 1, 2020, shall include a recommendation to the General Assembly regarding the resources needed to implement the requirements of this act.

SECTION 2. This act is effective when it becomes law.